CS112 - Fall 2022

Lab27

Instructor: Paul Haskell

INTRODUCTION

In this lab, you will work with Java graphics to build a "Lava Lamp" program. Groovy!

A picture of my dad at his grooviest, in Golden Gate Park, 1969.
(Don't tell him I showed this)

LavaLamp

Your **LavaLamp.java** program shall create a `JPanel` that contains a single `JButton`. Your program also shall create a `Timer` and a background `Color`. Every 100 milliseconds, the handler for `Timer` events should update the background color of the `JPanel`. The updates should be random adjustments (i.e. small changes) to the Red, Green, and Blue components of the `JPanel`'s background color. Values for each color component should be restricted to the range [0, 255]. You can experiment with how to update the color components to give you pleasing-looking color changes.

When the `JButton` is pressed once, the colors should stop updating and the current color component should be printed to `System.out` as three numbers separated by commas. When the `JButton` is pressed again, the colors should start changing again. This alternating behavior should continue.

- Third button press stops the colors from changing and prints current color

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- Fourth button press restarts the colors changing
- etc

Reminder

Put all your files in your **Lab27** directory and push to GitHub before the deadline. This assignment must be turned in before Monday Dec 5th at 11:59pm.

Conclusion

If this lab takes you more than 60 minutes, please get help. Most of your time outside class this week should be spent on **Project02**. This lab is simply intended to give you some useful graphics software of your own, and something groovy to run in the background while you continue to work on your project.

Grading Rubric

LavaLamp.java is worth 25 points. 5 points if it compiles, 10 points if it operates correctly (changing colors, printing colors, button control), and 0-10 points based on the grader's subjective judgment of code and design quality.

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